REMARKS

By this amendment, Claims 1 and 26-28 have been amended. No claims have been added or cancelled.

It is noted that Claim 9 was cancelled in the Reply that was mailed February 3, 2006. Hence, Claims 1, 3-8, 10, 11, and 26-38 are pending in the application.

The amendments to the claims as indicated herein do not add any new matter to this application. Furthermore, amendments made to the claims as indicated herein have been made to exclusively improve readability and clarity of the claims and not for the purpose of overcoming alleged prior art.

Each issue raised in the Office Action mailed August 22, 2006 is addressed hereinafter.

I.   ISSUES RELATING TO PRIOR ART

Claim 28 stands rejected under 35 U.S.C. § 101 because the claimed invention is allegedly directed to non-statutory subject matter. Claim 28 has been amended to recite a "computer-readable **storage** medium." Removal of the rejection is respectfully requested.

Claims 1, 3, 6, 7, 10, 11, 26-30, 32-35, 37, and 38 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent Publication No. 2002/0016858 to Sawada et al. (Sawada). The rejection is respectfully traversed.

Claims 4 and 5 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sawada and further in view of U.S. Patent Publication No. 2002/0026573 to Park. The rejection is respectfully traversed.

Claims 8, 31, and 36 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sawada and further in view of U.S. Patent No. 6,782,422 to Bahl et al. (Bahl). The rejection is respectfully traversed.

A.   CLAIM 1

An anticipation rejection under 35 U.S.C. 102 is overcome by a showing that the

applicant's claims include at least one feature that is not shown, described or taught in the cited

prior art reference, explicitly or by inherency. Sawada does not teach or suggest all features of

present Claim 1.

Present Claim 1 recites:

> A method of assigning a network address to a host based on authentication for a
> physical connection between the host and an intermediate device, the method
> comprising the computer-implemented steps of:
> **receiving**, at a router hosting an authenticator process for the host, from a first server
>   that provides authentication and authorization, **in response to a request for
>   authentication for the physical connection, first data indicating at least
>   some of authentication and authorization information**;
> receiving, at a DHCP relay agent process of the router, from the host, a DHCP discovery
>   message for discovering a logical network address for the host;
> **generating at the DHCP relay agent process a second message that comprises the
>   DHCP discovery message and the first data**; and
> sending the second message from the DHCP relay agent process to a DHCP server that
>   provides the logical network address for the host;
> wherein generating the second message further comprises sending a **third message**,
>   from the authenticator process to the relay agent process, **that contains at least
>   some of the authentication and authorization information** based on the first
>   data. (emphasis added)

> *1.   Sawada fails to teach or suggest "a second message...that comprises the*
>
> *DHCP discovery message and the first data"*

For example, the Office Action cites paragraphs 233-237 of Sawada as disclosing the

step of "generating...a second message that comprises the DHCP discovery message and the

first data" as recited in Claim 1. Earlier in Claim 1, "first data" indicates "at least some of

authentication and authorization information." Thus, the second message, according to Claim

1, comprises a DHCP discovery message **and** some of authentication and authorization

information.

Sawada does not teach or suggest such a message. In fact, Sawada teaches the prior art approach of (a) a user terminal being assigned an IP address, and then (b) the user terminal seeking authentication to a server. In Sawada, the two processes (obtaining an IP address and obtaining authentication) are completely orthogonal, i.e., the processes occur separately from each other. The address request packet (i.e., the alleged DHCP discovery message) of Sawada that is sent to a DHCP server **does not include authentication and authorization information.** Therefore, Sawada fails to teach or suggest that a message comprises a "DHCP discovery message and first data", as claimed.

2. *Sawada fails to teach or suggest "generating [the] second message at the DHCP relay agent process [of the router]"*

Even if Sawada did disclose a generated message that comprises a DHCP discovery message and first data, as claimed, Sawada fails to teach or suggest that such a message is **generated "at a DHCP relay agent process",** as Claim 1 recites. Sawada mentions a DHCP relay agent function in paragraph 233. However, the DHCP relay agent function is part of a packet communications apparatus A and the function is used only has a forwarder of packets between a user terminal and a DHCP server. Sawada does not even suggest that any type of message is generated at the DHCP relay agent function.

3. *Sawada teaches a different ordering than Claim 1*

Sawada cannot disclose all the features of Claim 1 because Sawada teaches a different ordering of the authenticating and address assigning processes. Paragraph 235 and FIG. 33 of Sawada describes a user terminal gaining authentication **after** an IP address has been assigned by a DHCP server ("after being assigned the IP address, the user terminal 2806 attempts to gain authentication…by issuing request for authentication"), whereas Claim 1 states that the

9

authentication and authorization information is received **before** a DHCP server receives the

DHCP discovery message.

> *4.   Sawada fails to teach or suggest "sending a third message, from the*
>
> *authenticator process to the relay agent process"*

The Office Action also cites paragraphs 233-237 of Sawada as teaching "wherein

generating the second message further comprises sending a third message, from the

authenticator process to the relay agent process, that contains at least some of the authentication

and authorization information based on the first data" as recited in Claim 1. This is incorrect.

The router of Claim 1 includes **an authenticator process and a DHCP relay agent process**.

Nothing in Sawada is analogous to the router of Claim 1. As mentioned above, Sawada

mentions a DHCP relay agent function but fails to teach or suggest that said function executes

on a router that also includes an authenticator process. Furthermore, even if Sawada did

disclose such a device or router, Sawada fails to teach that "at least some of the authentication

and authorization information" is sent from the authenticator process to the relay agent process,

as Claim 1 requires.

B.   BENEFITS OF CLAIM 1

The four different references cited in the four Office Actions and the rationales specified

therein indicate that Applicants' approach may be unclear. Authentication and authorization

checks are performed, and then information indicating a successful authentication and

authorization is handed off to a DHCP server that assigns an address. In this approach, the

DHCP server does not have to **re-perform** authentication and authorization.

Claim 1 recites that a router hosting an authenticator process for the host receives, from

a first server that provides authentication and authorization, in response to a request for

authentication for the physical connection, first data indicating at least some of authentication and authorization information. Thus, host authentication and authorization has occurred. A DHCP relay agent process of the router receives a DHCP discovery message from the host for discovering a logical network address for the host. The DHCP relay agent generates a second message based on the DHCP discovery message and the first data. The DHCP relay agent process sends the second message to a DHCP server that provides the logical network address for the host. Generating the second message further comprises sending a third message, from the authenticator process to the DHCP relay agent process, that contains at least some of the authentication and authorization information based on the first data. Providing that information relieves the DHCP server from having to re-authenticate the user as a condition for assigning an address.

These features distinguish Sawada, which has no teaching or suggestion whatsoever regarding generating a message that comprises a DHCP discovery message **and** first data (that indicates authentication and authorization information).

C.   CLAIMS 26-28

Each of the features discussed above for Claim 1 is present in all independent Claims 26-28. Therefore, Claims 26-28 are patentable for at least those reasons that Claim 1 is patentable. Reconsideration of Claims 26-28 is respectively requested.

D.   CLAIMS 3-8, 10-11, AND 29-38

Each of the features discussed above for Claim 1 is present, by dependency, in Claims 3-8, 10-11, and 29-38. Because each of the dependant claims include the limitations of claims upon which they depend, the dependant claims are patentable for at least those reasons the

11

claims upon which the dependant claims depend are patentable. Reconsideration of Claims 1,

3-7, 10-11, and 26-27 is respectfully requested.

     E.   CLAIMS 8, 31, AND 36 — SAWADA IN VIEW OF BAHL

Claims 8, 31, and 36 stand rejected under 35 U.S.C. 103(a) as allegedly unpatentable

over Sawada in view of Bahl. Each of the features discussed above for Claim 1 is present, by

dependency, in Claim 8. Because dependant Claim 8, 31, and 36 includes the limitations of

Claim 1, Claims 8, 31, and 36 is patentable for at least the reasons given above with respect to

Claims 1, 26, and 27. Further, Bahl does not cure the deficiencies noted above with respect to

Sawada. Reconsideration of Claims 8, 31, and 36 is respectfully requested.

II.   CONCLUSIONS AND MISCELLANEOUS

For the reasons set forth above, it is respectfully submitted that all of the pending claims

are now in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is

believed next in order, and that action is most earnestly solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if it is

believed that such contact would further the examination of the present application.

Please charge any shortages or credit any overages to Deposit Account No. 50-1302.

     Respectfully submitted,

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     _____

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